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EXAMINER

NGUYEN, DAVID Q

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 06/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

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# Office Action Summary

Application No.

09/693,305

Applicant(s)

BAHK ET AL.

Examiner

David Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1,5,9,13,17, and 22 contain subject matter “a method and an apparatus for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a base station controller associated with *a particular cell of the plurality of cells* adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested from *a cell adjacent to one of the cells* in communication with a mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS)” which is not clear.

What does “*a cell adjacent to one of the cells*” mean?

Examiner tries the best to understand the language of the above subject matter. Examiner assume that the above subject matter means: “a method and an apparatus for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a base station controller associated with a particular cell of the plurality of cells adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested from *a cell adjacent to the particular cell* in communication with a mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS)”.

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Moreover, claims 9, 13, 17, and 22 contain subject matter “transmitting a message for adjusting an admission threshold from the cells adjacent to said one adjacent cell according to adjustment of the admission threshold” which is not clear.

What does “*from the cells adjacent to said one adjacent cell*” mean?

Examiner tries the best to understand the language of the above subject matter in these claims, but Examiner can not make rejection to these claims because of the language of the claims.

Claims 10-12 depend on claim 9. Therefore, they are rejected.

Claims 14-16 depend on claim 13. Therefore, they are rejected.

Claims 18-21 depend on claim 17. Therefore, they are rejected.

Claims 23-26 depend on claim 22. Therefore, they are rejected.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eriksson et al in view of Nagarajan et al. (US Patent Number 5884174).

Regarding claim 1, Eriksson et al disclose a method for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, wherein a base station controller associated with a particular cell of the plurality of cells adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested from a cell adjacent to one of the cells in communication with a mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS) (see col. 2, lines 1-13). Eriksson et al are silent to disclose the method comprising the steps of:

- (a) monitoring a quantity of handoff drops versus a quantity of handoff calls occurring for an initial  $L_p$  term;
- (b) adjusting the admission threshold according to a result of the initial  $L_p$  term monitored in step (a); and
- (c) repeating the steps (a) and (b) for a successive  $L_p$  term, while changing a value of a second term  $SP$  until the target handoff dropping probability is satisfied during the successive  $L_p$  term, which is longer than or equal to the initial  $L_p$  term and includes the initial  $L_p$  term.

However, Nagarajan et al disclose:

- (a) monitoring a quantity of handoff drops versus a quantity of handoff calls occurring for an initial  $L_p$  term (see fig. 4A-4B and fig. 5);
- (b) adjusting the admission threshold according to a result of the initial  $L_p$  term monitored in step a (see fig. 4A and fig. 4B); and

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(c) repeating the steps (a) and (b) for a successive  $L_p$  term, while changing a value of a second term  $SP$  until the target handoff dropping probability is satisfied during the successive  $L_p$  term, which is longer than or equal to the initial  $L_p$  term and includes the initial  $L_p$  term (see fig. 4B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Nagarajan et al to Eriksson et al in order to get a small handoff dropping probability for guaranteeing a quality of service (QoS).

Regarding claim 5, Eriksson et al disclose an apparatus for adaptively adjusting an admission threshold in a wireless network including a plurality of cells, a base station controller associated with a particular cell of the plurality of cells adaptively adjusts the admission threshold for determining whether to admit or drop a handoff call requested from a cell adjacent to one of the cells in communication with a mobile station, to satisfy a target handoff dropping probability for guaranteeing a quality of service (QoS) (see col. 2, lines 1-13), Eriksson et al are silent to disclose the apparatus comprising:

- a monitoring block for monitoring the number of handoff drops versus the number of occurred handoff calls for an initial  $L_p$  term;

- a comparator for comparing a monitoring result with the target handoff dropping probability; and

- an adjusting block for adjusting the admission threshold according to a comparison result output from the comparator;

wherein the monitoring block monitors a successive  $L_p$  term, while changing a value of a second term  $Sp$  until the target handoff dropping probability is satisfied during the second term

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Sp, which is longer than or equal to the initial 4 term and includes the initial Lp term, the comparator and the adjusting block performing corresponding operations according to the comparison result.

However, Nagarajan et al disclose a monitoring block for monitoring the number of handoff drops versus the number of occurred handoff calls for an initial Lp term (see fig. 4A-4B and fig. 5);

a comparator for comparing a monitoring result with the target handoff dropping probability (see fig. 4A and fig. 4B); and

an adjusting block for adjusting the admission threshold according to a comparison result output from the comparator (see fig. 4A and fig. 4B);

wherein the monitoring block monitors a successive Lp term, while changing a value of a second term Sp until the target handoff dropping probability is satisfied during the second term Sp, which is longer than or equal to the initial 4 term and includes the initial Lp term, the comparator and the adjusting block performing corresponding operations according to the comparison result (see fig. 4A and fig. 4B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Nagarajan et al to Eriksson et al in order to get a small handoff dropping probability for guaranteeing a quality of service (QoS).

Regarding claims 2 and 6, Eriksson et al disclose a method and an apparatus modified by Nagarajan et al comprising all of the limitations as claimed above. Nagarajan et al also disclose wherein the step includes decreasing the admission threshold and increasing the value of second term Sp when the target handoff dropping probability is not satisfied (see fig. 4A and fig. 4B).

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Nagarajan et al to Eriksson et al in order to get a small handoff dropping probability for guaranteeing a quality of service (QoS).

Regarding claims 3 and 7, Eriksson et al disclose a method and an apparatus modified by Nagarajan et al comprising all of the limitations as claimed above. Nagarajan et al also disclose wherein the initial  $L_p$  term set to be equal to the second term  $S_p$  (see fig. 4A and fig. 4B).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Nagarajan et al to Eriksson et al in order to get a small handoff dropping probability for guaranteeing a quality of service (QoS).

Regarding claims 4 and 8, Eriksson et al disclose a method and an apparatus modified by Nagarajan et al comprising all of the limitations as claimed above. Nagarajan et al also disclose wherein the value of the successive  $L_p$  term is increased in a unit of the value of the initial  $L_p$  term (see fig. 4A and fig. 4B). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of the Nagarajan et al to Eriksson et al in order to get a small handoff dropping probability for guaranteeing a quality of service (QoS).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. \*\*\*.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 7036054254. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 703-305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9508 for regular communications and 703-305-9508 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DN

David Nguyen  
May 22, 2003

  
Lee Nguyen  
Primary Examiner